

Study of the Ability of the People's Republic of China to Conduct an Invasion of Taiwan

**A Monograph
By
Major Scott F. Hume
United States Army**

**School of Advanced Military Studies
United States Army Command and General Staff College
Fort Leavenworth, Kansas**

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Monograph Approval

Major Scott F. Hume

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Approved by:

Dr. Robert M. Epstein, Ph.D. **Monograph Director**

COL Robin P. Swan, MMAS **Director, School of Advanced Military Studies**

Philip J. Brookes, Ph.D. **Director, Graduate Degree Program**

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ABSTRACT

STUDY OF THE ABILITY OF THE PEOPLE'S REPUBLIC OF CHINA TO CONDUCT AN INVASION OF TAIWAN by MAJ Scott F. Hume, USA, 50 pages

The Chinese civil war ended in 1949 and the defeated Nationalist forces fled to Taiwan to escape the Communist victors. Since then, the Communist leadership of Mainland China has wanted to regain control of the island of Taiwan, while those who fled to Taiwan have wanted independence. Since 1949 China has refused to recognize Taiwan as independent and has consistently espoused reunification. Taiwan, while continuing to recognize themselves as Chinese, also want reunification, but refuse to do so until China reforms its political ideology. As a result, great tension has persisted between both parties for the past 51 years but without much positive action to alleviate it. While hostilities remain, inaction has been the status quo for the simple reason that China has not been able to do anything about it.

Today, although China is no longer allied with the former Soviet Union, it has moved nearly into the modern era militarily with its assistance. Opposing the Russian assistance, the U.S. has consistently supported Taiwan, and subsequently, Taiwan is also a regionally modern military power. The issue of military modernization has never been a significant issue in the past because China posed no threat to Taiwan regarding unification, but that situation is changing. As China develops militarily, it increases its ability to force Taiwan to reunite. Taiwan, not to be coerced, understands the emerging threat and continues to modernize itself militarily to counter the Chinese threat.

This monograph examines the ability of the People's Republic of China to conduct a successful invasion of Taiwan as well as the ability of the Republic of China to defend itself from invasion. This study examines the historical background of the conflict, the National Security and Military Strategies and the economies of each state in order to illustrate national philosophies, attitudes and relations to each other. Following the background material, each branch of the armed forces of each nation is studied, as well as some non-conventional and joint capabilities to facilitate and overall comparison of the armed forces. Finally, a study of the terrain of Taiwan is conducted to understand the options for invasion and the influence of terrain on invasion scenarios.

This study concludes that the People's Republic of China does not currently have sufficient military capability to successfully invade Taiwan.

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CHAPTER I

INTRODUCTION

Statement of the problem

On 18 March 2000, the Republic of China (Taiwan) elected Chen Shui-bian as the nation's president elect.¹ He is a member of the Democratic Progressive Party (DPP). The DPP is the party known to support independence from the Peoples Republic of China (PRC - aka Mainland China).² Most of the world considers Taiwan to be part of China, and Taiwan itself has never formally declared independence.³ China clearly recognizes Taiwan as part of the Chinese nation much the same way the United States considers any of its states a part of the United States. However, Taiwan acts like an independent nation. Its independent attitude is a result of China's inability to control them. In response China refers to Taiwan as a "renegade province".⁴

Since the end of martial law in 1987 Taiwan is viewed by the United States as a democracy.⁵ Taiwan is also the seventh largest trading partner of the United States.⁶ Thus, Taiwan's ability to continue to act as a sovereign entity with respect to US interests becomes clear. There is much at stake for both Taiwan and the United States. The United States has a treaty with Taiwan promising to assist in its defense should China attempt to invade Taiwan as long as Taiwan has not provoked China by declaring independence.⁷ Although Taiwan has not declared independence, the Premier of China, Prime Minister Zhu Rongji, stated unequivocally that China "would be willing to 'spill blood' to prevent (Taiwan) independence."⁸

It is clear that China wants to regain control of Taiwan, and Taiwan, while not wanting war, clearly does not want to be governed by the communist government of

China. As hostilities rise over the issue, and the possibility of a hostile conflict increases, the author will analyze the ability of China to invade Taiwan. The government of the PRC has clearly stated that this is an option and the Republic of China (ROC) has clearly stated that it is prepared for such an action. Due to the immensity of what is at stake in this situation to those directly involved and to the United States this topic is worthy of study.

In addition to the obvious significance of the situation there is an underlying significance specific to the author. Following the submission and approval of this work the author will be reassigned as a planner for the 25th Infantry Division at Schofield Barracks, Hawaii. As a planner at a military unit in the Pacific Command (PACOM) Area of Responsibility (AOR) it is incumbent on the author to insure he is knowledgeable on the intricacies of the crucial issues in the region. As a first step to understanding the causes of the conflict one must study the events that led to the schism between the People's Republic of China and the Republic of China.

Historical Background of the Situation

The last Chinese empire ended by revolution in October 1911.⁹ The new government attempting to replace the former monarchy had an ideology based on the principles of nationalism, democracy and socialism.¹⁰ Due to the social upheaval that violent revolution brings to a long suppressed nation, fledgling replacement governments often have significant obstacles to overcome. One obstacle of the new Nationalist Chinese government was the distrust the people had of government. To overcome this mistrust the new Nationalist government embraced all of China's population, regardless of political ideology, including the Communists.¹¹ By embracing the Communists, the

new Nationalist government found a friend in communist Russia and was subsequently given much needed support. This support helped lead to the formation of a corps of dedicated communist believers within the new government. The communist and nationalist ideological incompatibilities led to civil war in China in 1930.¹²

The Chinese civil war was eventually used by Japan as an excuse to deploy troops to China and finally to invade China outright. To parry this blow the Nationalist and Communist forces temporarily put aside their disdain for one another to fight the common enemy. At the outbreak of war in the Pacific Theater between the Allied Forces and Japan during the Second World War, the Allies began assisting China in its fight against the Japanese. After the defeat of Japan, the Chinese civil war resumed. In 1949 the Communist forces under the leadership of Mao Zedung defeated the Nationalist forces of Chiang Kai Shek. Chiang's forces fled to the island of Taiwan. Each side now was divided by over one hundred miles of ocean. This was an obstacle that could not be overcome by either side in pursuit of forcing its will on the other. This situation remains unchanged to this day.

In a global context, the Chinese civil war can be viewed as an early chapter in the story of what is now commonly referred to as the "Cold War". This battle between democracy and communism led immediately to the superpowers taking sides so that each prevented the other from attaining regional hegemony. The United States supported the forces of Chiang Kai Shek, while the Soviet Union supported Communist China under Mao Zedung.

After the Nationalist government fled to Taiwan, the leadership of mainland China wanted to regain control of the island of Taiwan, while those who fled to Taiwan

wanted independence. Since 1949 China has refused to recognize Taiwan as independent and has consistently espoused reunification. Taiwan, while continuing to recognize themselves as Chinese, also wanted reunification, but refused to do so until China reformed its political ideology. As a result, great tension has persisted between both parties for the past 51 years without much positive action to alleviate it. While hostilities remain, inaction has been the status quo for the simple reason that China has not been able to affect a reunification.

Although China is no longer allied with the Soviet Union it has moved nearly into the modern era militarily. To oppose this, the U.S. has consistently supported Taiwan, and subsequently, Taiwan is a regionally modern military power. The issue of military modernization has increased the tension between the reunification efforts of the PRC and independence posturing of Taiwan. As China develops militarily, it increases its ability to force Taiwan to reunite. Taiwan, not to be coerced, understands the emerging threat and continues to modernize itself militarily in order to counter the Chinese threat. This monograph will confirm that China currently does not have the military capability to invade Taiwan and force reunification.

CHAPTER II

METHODOLOGY

Limitations for which this study is valid

This monograph makes one major assumption. The author assumes that in the event of a PRC invasion of the RoC that the United States **would not** assist in the defense of Taiwan through the deployment of ground, naval or air forces to direct combat with the PRC. This assumption also includes the belief that the United States would assist the RoC

with its defense through economic support and military support in the form weapon sales and intelligence. Furthermore, this study assumes that the PRC would receive similar support from its allies but that no other nation would support the PRC with combatants that would take a direct role in a deliberate invasion of Taiwan.

Evaluation Criteria

1. Military Forces: The military forces of China and Taiwan will be compared against each other in terms of overall strength, equipment, training and morale. This comparison will include each nations military strategy and competing requirements within each nation's military strategy.

2. Joint Operations Capabilities: This criterion will first determine the capability within each military force for sister services to support one another and then the resultant determinations will be compared against one another. This process will allow a comparison of each forces ability to operate as a joint force.

3. Other than Conventional Capabilities: This criterion will examine military systems that fall outside the realm of the conventional forces but are used in support of conventional forces

4. Terrain: This criterion will examine a number of different factors. Among them will be the distance between possible staging areas in Mainland China to Taiwan, amphibious landing sites in Taiwan, targets for possible airborne assaults and terrain issues that support or deny facilitation of Chinese power projection and logistics sustainment to invasion forces.

This monograph will conclude by combining the four criteria above for an overall comparison of the capabilities of China and Taiwan. This will allow the author to determine if China currently has the capability to invade Taiwan.

CHAPTER III

COMPARISON OF NATION MILITARY STRATEGIES

National Military Strategy of the Peoples Republic of China

The PRC does not publish a national military strategy (NMS) but it does publish a national security strategy and through this members of the Rand Corporation have deduced a plausible national military strategy for the PRC. Because a PRC NMS does not exist the author will accept this model as the PRC NMS.¹³

According to the RAND Study the PRC's National Security Strategy (NSS) encompasses three areas: sovereignty, modernity and stability.¹⁴ In support of the PRC's NSS, the military has translated the elements of the NSS into three sets of National Military Objectives: Protect the Party and Safeguard Stability, Defend Sovereignty and Defeat Aggression and Modernize the Military and Defend the Nation.¹⁵ The final translation of a National Security Strategy to action takes the National Military Objectives and develops broad concepts called National Military Strategic Concepts to provide guidance on how the National Military Objectives will be attained. The PRC's National Military Strategic Concepts (NMSC) are nuclear deterrence, political work, forward defense and army building.¹⁶ While concepts and assumptions are easy to write they are nebulous without putting them into context. The following is an estimate of China's NMSC, viewed through the context of her security environment:

1. The PLA must be prepared to deal with internal unrest everyday.
2. The PLA must be prepared with military options for China's leaders to consider in dealing with Taiwan should the national leadership decide to employ the military element of national power to achieve its political ends. This is a current requirement and will endure.
3. The PLA must develop a credible defense of its economic center of gravity: the coast. It must also be prepared to enforce Beijing's maritime claims.
4. Any bilateral security concern that involves China with another country on its land border (India, Korea, Vietnam, Russia, etc.) should be considered an enduring security concern regardless of how pacific the situation is at the moment or promises to remain in the future.
5. Russia is a long term and enduring security concern for Beijing due to proximity, historical mistrust, and its potential to regain its great power status.
6. For the foreseeable future, the United States remains an enduring security concern not because it is perceived as a direct military threat to China but because of its unpredictability, its power, the proximity of its military forces, its web of bilateral military alliances, and its potential as a 'spoiler' for core Chinese security interests (Taiwan, Japan).
7. Japan is probably the one country in the region that in the mid-term Beijing views with the most suspicion as a potential challenger in the military as well as political and economic realms.
8. As for force structure and mix of arms, the PLA must enhance its maritime and aerospace capabilities. At the same time, because of continuing possibility of internal unrest and current (India, Korea) and potential (Russia, Vietnam) security concerns along China's borders, the PLA cannot total neglect its ground forces.
9. Finally, China must continue to field a credible nuclear deterrent, especially in light of India's recent actions and Chinese concerns about the potential for the U.S. or Russia to acquire credible missile defense systems.¹⁷

Conclusion of Chinese NMS

Assuming the RAND study is correct a number of questions must be answered to understand where the PRC military stands and what its capabilities are. The PRC has a number of threats on its periphery and although the Republic of China (Taiwan) is part of China's security environment there is no evidence that it poses a significant military threat. Therefore, this author assumes that even though the PRC has desired reunification

since 1949, it has never devoted any substantial resources to enable the military to execute forced reunification. Furthermore, this author assumes that any military capability that could currently be used to execute this mission is merely a bi-product of capabilities designed to counter other threats.

National Military Strategy for the Republic of China (Taiwan)

The author's research did not find a specific national military strategy for the Republic of China. Though the exact national military strategy is not available one can deduce its major tenets through a simple process of elimination. First, because the Republic of China is now a true democracy as of the March 18, 2000 election, one can assume that the military is not responsible for the protection or sustainment of the ruling party. Second, one can assume that because the Republic of China shares no borders with other nations that it has not designed its military for protection against cross border incursions. Finally, since the country does not have a significant history of internal societal dysfunction the author assumes the military was not designed for quelling internal disorder.

From 1949 until recently the Republic of China stated publicly that one day it would once again seize power in China, through force if necessary. Subsequently, this decree was a factor around which military capabilities were designed. The Republic of China no longer desires to reclaim China and no longer requires its military to maintain or develop the required military capabilities to do so.¹⁸ Therefore, because "China is the ever dominant threat to the existence to Taiwan" the author will assume that the major pillar to the national military strategy is the defense of the Republic of China (Taiwan) from invasion by the forces of Mainland China.¹⁹

Conclusion of RoC NMS

The Republic of China has only one major threat to its existence and it comes from the People's Republic of China. In recognition of this, the author assumes that the national military strategy of the Republic of China revolves almost completely around the defense Taiwan from an invasion from China.

CHAPTER IV

COMPARISON OF ECONOMIES

Republic of China (Taiwan) - Economy

Because not every fact about a nation's economy can be reviewed in this work, this chapter will identify each country's economic position in relation to the other and to its own armed forces. This chapter will also show the relationship between the National Military Strategy with respect to the defense industry and its level of resilience in the hypothetical invasion scenario this paper presents.

The RoC economy has flourished nearly since its inception in 1949. Through the mentoring of the U.S., the nation has adopted a capitalistic economy that has become very robust.²⁰ Although the nation's economy was born under martial law, it was designed using a 'free-enterprise' model.²¹ Subsequently, Taiwan's economy has steadily grown and modernized for over 50 years. Their economy has moved away from its original agricultural base and is now a world leader in technology and manufacturing.²² Because of the nature of the economy and its success, the unemployment rate of Taiwan is less than three percent. Although exact data is not available, indicators show that there is not significant poverty. There one may conclude that social unrest is low and the population is content.

As the RoC economy regards China, trading figures will be used to draw conclusions here. From a purely economic standpoint Taiwan exports nearly 24% of its goods to China through Hong Kong.²³ Although this is a significant portion, it is not estimated that Taiwan is dependent on China for the trade.²⁴ On the other hand, this 24% percent export figure translates to 12% of imports for China, and the implications of this statistic will be discussed in the next section. While the RoC economy is currently strong and apparently resilient, it does have an Achilles heel. Due to its position as an island nation it is susceptible to blockade and the obvious economic hardships that could entail.

The final significant aspect of the RoC economy is that because of its continuously increasing industrial and high technology focus it has developed a robust and highly capable defense industry.²⁵ Although many of its modern military systems are foreign purchased, the RoC has developed a capability to maintain them, upgrade and modernize them and successfully reproduce them in many cases.²⁶

People's Republic of China - Economy

The Chinese economy is currently robust and has proven its resilience through the 1998 Asian economic crisis but two significant factors have left a cancerous legacy on the current economy.²⁷ The first was the development of the economy under the communist rule starting in 1949. At the beginning of communist rule much of industry was what is now referred to as State Owned Enterprises (SOE). Much of this industry was built around the coastal areas and in the 1960's was moved inland in order to protect them from nuclear attack after a rift developed between China and the USSR.²⁸ These new inland industrial areas put a strain on a weak internal transportation infrastructure. Coupled with

this, state owned industries with no profit incentive often operated in the red and became a burden on the nation.

Second, much of the population was poorly educated and subsequently many SOE's could not keep pace with modern industrial and economic evolution. To fix this, the Chinese government injected reforms allowing for more free enterprise. Actions like these in the near term cause layoffs, movement of industry back to the coast thus disrupting the livelihood of entire areas and many businesses fail thus going out of business altogether. While the unemployment rate is only 3.1% it is rising.²⁹ The low unemployment rate in this case also does not accurately reflect the generally low standard of living nationally and its associated societal dangers and potential unrest to the governing party.³⁰

One economic tie between China and Taiwan is germane. Twelve percent of China's imports are from Taiwan. While this accounts for nearly one quarter of Taiwan's exports, Taiwan does not consider itself economically dependent on China. But because of the nature and quantity of the Taiwanese goods exported to China the absence of them in time of conflict could be significant enough to foment the internal unrest China so much wants to avoid.³¹

While China has recently focused on reducing its armed forces and better equipping the resultant smaller force, it has been poorly able to do so alone. While there is clearly evidence of the nation's technological capability to produce missiles there is equal evidence that the nation cannot internally produce modern planes and ships to resource its security requirements without outside assistance.³² Most of the outside assistance received in the form of modern military hardware and technology is from

Russia, which itself is a former enemy and still viewed as a future adversary.³³ Although China currently buys its hardware from an enemy and has not yet developed the capability to efficiently produce modern armaments in most categories its capability in this regard is growing.

Conclusion

There are two significant conclusions to draw from the economic relationship of Taiwan and China. It is clear that there are close economic ties between the two nations. In a scenario that placed both entities at war with the other, one would assume that all elements of national power would be used for one's advantage. In this case the advantage is in favor of Taiwan. If trade between the two were to cease as a prelude to or part of a war, economic hardships could be brought to bear on each nation. While the loss of a buyer for one quarter of its trade may injure Taiwan in the short term, there is no indication that other markets would not avail themselves eventually. Additionally, the economic hardships may also strengthen Taiwanese nationalism and garner world support assuming Taiwan was not the aggressor.

If China were to lose access to its Taiwanese imports the effect may be entirely different. The use of the economic element of national power against Taiwan would prevent the influx of much desired consumer goods that many Chinese have come to greatly desire over the past decade that for years were unavailable. A paucity of these goods brought about by a war that may not be entirely supported by the population (for which there is evidence) and coupled with the near term economic turmoil created by the transformation of a communist economy to a semi-free market economy could produce exactly what China does not want – popular and active resentment of the government.

The resultant lack of national unity and possible tasking of the military to protect the party (as per the PRC NMS) could cause significant challenges to the Chinese military.

The second economic conclusion drawn revolves around the modernity and robustness of the defense and agriculture industries. Years of economic prosperity in Taiwan, as well as other factors, have produced a highly capable defense industry in a nation that has maintained much of its agrarian roots. China on the other hand lacks the capability to produce, maintain or modernize sophisticated military systems like Taiwan. The conclusion is that Taiwan may be able to continue to produce sophisticated weaponry and feed itself much longer than China expects in the event the Chinese ever isolate the island in time of conflict.

CHAPTER V

ANALYSIS AND COMPARISON OF MILITARIES

The Armies

This section is not meant to stand-alone, as other sections may be able. Comparison of armies is not relative unless put into a context of their meeting. It is easy to visualize the meeting of navies and air forces that are only separated by one hundred miles of ocean. One cannot visualize the meeting of armies in this context unless comparison assumes the assistance of the navy and the air force. Because of this, a comparison of the ground forces will not be covered here but will be covered in the overall comparison of the militaries in the context of a PRC invasion of Taiwan.

The People's Liberation Army -PLA

As a wise man once said, "quantity has a quality all its own". This is an appropriate quote when analyzing the Peoples Liberation Army. The PLA is estimated to

have over two million personnel in its ranks and as many as one million reservists.³⁴

Without any type of perspective or context this is an incredibly large army. As discussed earlier, China has security requirements much more significant than Taiwan (if Taiwan is a security threat at all) on all sides. China is virtually surrounded by enemies. Translated this means the army has a lot of places to focus on, not to mention the requirements to protect China from itself. In this context the giant is not always ten feet tall. Additionally, the Chinese government has realized for some time that the army is not modern and has recently decided that modernization in terms of equipment and educated soldiers to man modern equipment is more important than size. Subsequently, China has recently announced that it will reduce the size of its standing army by five hundred thousand men by 2000 as the first step toward modernization.³⁵

Aside from the size, three other factors require analysis with regard to ground forces. How much of the force is designed or focused for employment outside its military region, the status of morale and level of training of the ground force, and its equipment.

First, it is not possible to accurately determine how much of the PLA could be considered for use in a possible Taiwan invasion. Although some experts believe that a future invasion of Taiwan is inevitable and is part of the Chinese military strategy, there is no evidence that actual plans have ever been developed along these lines.³⁶

This author believes that although invasion rhetoric is high, actions speak louder than words. China advertises the existence of a rapid reaction three-division airborne corps (a ground force actually under the control of the air force) with some airlift capabilities. Also, there is evidence that in recent moves to make the army more modern and projectable, that there are now three national level rapid-reaction divisions and at

least nine regional rapid reaction divisions.³⁷ Numerically this equates to 15 rapid reaction divisions that could theoretically be mobilized in 24-48 hours of notification if trained and equipped to U.S. Army standards. But this is not the case. The rapid reaction forces of the PLA were originally designed for use against land neighbors or internal strife.³⁸ There is no evidence that these forces were ever designed to move outside their regions and work together, the airborne corps excepted, and there is no evidence that the airborne corps is able to deploy enmasse and operate with regional rapid reaction forces.³⁹

The status of morale and level of training can be analyzed together. The PLA has low morale and its level of training throughout the ranks is also low. One cause for this stems from a poorly educated officer corps that continues to use nepotism in its promotion policy. Additional burdens on morale include poor living conditions for soldiers, conscription of the poorly educated and an economy that supports departure from the service after the initial conscription period. The Chinese army continues to be virtually a peasant army that revolves around the strength of its numbers and not its sophistication.⁴⁰

The Republic of China (Taiwan) Army

As mentioned earlier, Taiwan's national defense priorities changed in the late 1980's and no longer reflect a military requirement to invade China.⁴¹ The military strategy was modified to strictly focus on defense of the island from invasion by the PRC. With respect to ground forces, the transition appears to have been made quite quickly. The army has, in recent years, undergone a downsizing because it no longer is required to provide an invasion force for use against China. The budgetary savings has been used to

upgrade all branches of the armed services technologically and in accordance with the new entirely defensive military strategy.

The RoC army consists of 240,000 active duty troops organized into 15 divisions (10 light infantry, 2 mechanized infantry, 3 armor). In addition to this the RoC has the capability of activating one and a half million reservists for the army alone. This number is estimated in professional journals to represent a contribution to the ground force of seven light infantry divisions.⁴²

In addition to being a large, generally conscripted force, indicators suggest that it is armed with modern equipment throughout the ranks and that army personnel are well trained.

Comparison of Ground Forces

There are many ways to compare military forces. In this case three criteria will be used: the number of forces that can be employed by Taiwan versus the number needed by the RPC to assault RoC ground forces in the defense, the quality of the forces with regard to training and professionalism, and the modernity of equipment.

By the data above the RoC army can generate the equivalent of twenty-two divisions organized, equipped and trained to defend Taiwan.⁴³ By using data from U.S. island hopping experience of World War II, an invading force would need a three to one superiority to successfully attain a foothold and subsequent victory.⁴⁴ This same calculus indicates that the PLA would have to employ sixty-six divisions across nearly one hundred miles of ocean with airborne or beach landing capability. There is no evidence that the PLA has a force this large and currently trained on the requisite tasks for this type of operation.

Training and organization is the final comparative category. The RoC army is organized and trained for the defense of Taiwan and is led by a better-educated cadre than the PLA. Additionally, the PLA has not shown the existence of any plan or appropriate training for invasion of Taiwan. From a morale standpoint, the permeating ideology of Taiwan is that they want to be left alone and will actively defend their nation.⁴⁵ Chinese opinion has recently indicated that Taiwan should be allowed to choose its own course and that finding jobs and strengthening the PRC economy are much more important than military action toward the island.⁴⁶

From an equipment standpoint, all advantages go to the defender (in this case supporting services and joint operations are not considered for comparison as they will be included in the final assessment). The ground forces of the Taiwanese military are better trained than the PLA and are better prepared, organized, led and equipped for the defense of Taiwan than the PLA is to invade Taiwan.

The Navies

The PLA Navy

The PLA Navy is divided into three fleets: The North Sea Fleet, The East Sea Fleet and the South Sea Fleet. The North Sea Fleet is responsible for the area from the Yalu River down to Lianyungang, the East Sea Fleet is responsible for the area from Lianyungang to Dongshan and the South Sea Fleet is responsible for the area from Dongshan to the border of Vietnam.⁴⁷ The division of the areas of responsibility would lead one to believe that the East Sea Fleet is responsible for naval actions with respect to Taiwan as the Taiwan Strait passes through this fleets area of responsibility.

While the PLA Navy has three fleets and is the third largest navy in the world with respect to surface combat vessels, its size and capabilities are somewhat deceptive.⁴⁸ A number of factors lead the author to conclude this. While the PLA Navy is large it is also responsible for the protection and patrolling of 11,000 miles of coastline. Therefore, it is actually spread very thin.⁴⁹ Another significant factor influencing the PLA Navy is that it is not considered a 'blue water' navy.⁵⁰ One analyst believes that the PLA Navy will not have an operational radius large enough to reach the first island chain in the South China Sea until early this century.⁵¹ Coupled with these facts and the hypothetical national military strategy cited in Chapter 3, this author concludes that the PLA Navy in the past was not designed for power projection or major offensive operations but to defensively protect regional interests.

Factors other than size and projection range are significant if one is to analyze the PLA Navy for future comparison. As of the writing of this monograph, the PLA Navy had no aircraft carriers. While there is clearly a desire to obtain one all efforts to date have failed.⁵² Even if one could be procured immediately (which is estimated to be nearly impossible) training the crew could take years. Designing, procuring and training a fleet to support and protect a carrier as well as procuring and training a carrier capable air component would also be extremely time consuming.⁵³ "Recent reports indicate that plans for building or acquiring an aircraft carrier have been delayed so that one will not become operational until about 2020."⁵⁴ This type of power projection capability will not develop quickly for the PLA Navy.

The great strengths of the PLA Navy is its submarine fleet and recently purchased Russian Sovremenny Class destroyers equipped with the very modern 'Sunburn' anti-ship

missile. As of June 1999, it was estimated that the PLA Navy had 64 - 77 active submarines available, as well as two Sovremenny Class destroyers.⁵⁵ There is some speculation as to the quality of the submarines and the quality and quantity of trained crews. Although many consider PLA submarine quantities a strength, particularly when used as a component of a blockade, this author will show this capability is not as formidable as many believe.⁵⁶

The final issue for analysis regarding naval capabilities revolves around landing craft. In almost any invasion scenario the Chinese will have to generate significant ground combat power with support from air or naval assets. The following chart shows the PLA Navy's landing craft quantities.⁵⁷

Table 1. PLA Navy Landing Craft Capabilities

Landing Craft Type	Quantity	Maximum Troop Load	Maximum Tank Load	Total Troops / Tanks
Yukan	8	200 or	10	1600 or 80
Qiongsha	4	400	0	1600
WUHU-A	9	250 or	2	2250 or 18
Yuhai	9	250 or	2	2250 or 18
Yuting	6	250 or	10	1500 or 60
Yuliang	31	0	3	0 and 3
Yudao	1	100 and	10	1000 and 10
Yudeng	1	500 or	9	500 or 9
Yunnan	300	100 or	2	30,000 or 600
DAGU-A	1	150	0	150 and 0
Totals				40,850 or 798

The PLA Navy has very little capability to deliver ground forces to Taiwan. Assuming the unlikely, that every single landing craft is available, properly manned and capable of sailing the one hundred miles to the closest shore of Taiwan, the PLA Navy can only send the equivalent of two light infantry divisions. This figure does not include

supporting arms such as tanks or artillery or supplies of any type. Equipment and supplies would significantly decrease the number of soldiers included in the two-division estimate above. The PLA Navy does not have an invasion capable amphibious force.

The RoC Navy

The RoC Navy is considerably smaller than the PLA Navy. From a 1999 assessment the RoC Navy had only 149 surface combatant vessels ranging in size from coastal patrol craft to destroyers and four submarines.⁵⁸ Though small, the RoC Navy is regionally modern, well equipped and appropriately designed for the defensive nature of its requirements with respect to its national military strategy.

In response to the defensive nature of the Navy's mission it has equipped itself with technology almost exactly the counter to Chinese naval strengths. The RoC Navy has equipped all surface combatant ships with surface-to-surface anti-ship missiles. As well, a number of surface combatants are equipped with anti-aircraft and anti-submarine weapons. The portion of the fleet that is made up of the largest vessels has an adequate at-sea sustainment capability in the form of tankers and repair ships. One other combat significant support capability includes mine countermeasure vessels.

While the equipment and capabilities themselves will be shown below in the comparison to be an equal match for what naval forces the PLA Navy could bring to bear, there are other strengths in the RoC Navy. An obvious strength is that the RoC Navy has built the foundation of the force on former U.S. equipment. The equipment, while no longer first rate by U.S. Navy standards, is still modern by the regions standard and is well supported by the United States. As well, the RoC has a capability of system modernization that gives the RoC Navy some level of self-sufficiency. An example of

this is the indigenously produced Hsiung Feng anti-ship missile. While the equipment the Navy puts to sea is adequate, the additional strength is that it appears to all be maintained in seaworthy fashion and all manned by trained crews. The final strength of the RoC Navy is its coastal patrol capability. The small coastal patrol craft that make up this capability are not equipped with anti-ship weaponry in the sense that large surface combatants are, but are equipped with weapons systems that are quite adequate to block or destroy lightly armed landing craft and would therefore stand as one more obstacle for and invasion force to overcome.

Comparison

It is apparent that the PLA Navy is much larger than Taiwan's. From strictly comparing numbers it can be inferred that the PLA Navy has an advantage. While this short comparison cannot cover all facets of naval warfare in order to compare naval forces, there are a few key characteristics of each navy that when described can provide for an accurate comparison. The chart below allows comparison of raw numbers of strengths of the navies.

Table 2. Ship Comparison Table⁵⁹

Ship Type	PLA Navy	RoC Navy
Aircraft Carrier	0	0
Submarines	64	4
Destroyers	18	18
Frigates	36	18
Corvettes	0	3
Fast Attack Craft	329	98
Minesweepers	34	12
Minelayers	1	0

It is no longer the strategy of Taiwan to desire to bring China under the rule of Taiwan.⁶⁰ Taiwan now only recognizes China as a threat to its lifestyle and livelihood as opposed to a region to be reunited. From this standpoint the navy has very little requirement to conduct force projection operations at the strategic level. The navy's purpose is to protect Taiwan and its regional interests from Chinese invasion. Taiwan has recognized this for some time. Recognition of this strategy in conjunction with the nation's ability to modernize and with help from the U.S., allowed Taiwan to develop a professional, well-equipped and regionally modern navy. The same cannot be said for China. Additionally, while both nations have recognized a need for a more modern navy (though for different reasons) Taiwan has made the greater strides recently in upgrading its equipment. In the past five years Taiwan has purchased near new and regionally modern major combatant ships to replace approximately one third of its navy. Additionally, it has purchased these ships from countries that have been long time, economically stable friends (U.S. and France). The opposite is true of China. The Chinese navy has many problems in the quality of personnel and the maintenance and modernity of its equipment. The Chinese are trying to modernize their navy and have decided to do it by purchasing ships from Russia (a long time enemy and fiscally unstable nation) or by building them at home through industry that has proven to be nearly incapable of producing modern vessels.⁶¹ The Taiwanese Navy is more modern, organized, trained and manned than the PLA Navy.

To accurately compare the capabilities of both navies a number of assumptions must be made. First, to compare the RoC navy to the PLA Navy by virtue of sheer sum of capabilities and quantity of equipment would yield inaccurate results. To assume that

during an invasion of Taiwan the entire PLA Navy would be brought to bear against Taiwan would be a poor assumption in light of the security risks that would be assumed by leaving almost the entirety of its maritime security issues uncovered. Therefore the author assumes that no more than two fleets can be used against Taiwan in an invasion. An exception to this assumption is that all landing craft could be used. The final fact that must be understood in a comparison of these navies is the philosophy / strategy that created them and guides their destiny. The Taiwan navy has been designed, trained and equipped from its inception for the defense of Taiwan and the PLA Navy has not been designed trained or outfitted for large-scale power projection operations. The following chart will allow the reader to compare facts.⁶²

Table 3. Comparison of PLA Navy Assets Available for Invasion of Taiwan versus Counter-Capabilities of the Republic of China Navy

Capability	PLA Navy	RoC Navy Counter
Surface Combat Vessels	35 (2/3 of inventory)	36 surface combatants
Submarines	42 (2/3 of inventory)	4 Submarines, 9 ASW Helicopters, 30 ASW ships
Mine Warfare	1 minelayer, 64 Submarines	12 mine sweepers
Landing Craft	372 (entire inventory)	53 Coastal Missile Craft, 45 Inshore patrol craft
At Sea Logistics	1 tanker (1/2 of inventory), 9 supply (2/3 of inventory)	3 tankers

When the numbers above are put into context the PLA Navy does not appear as large as raw numbers indicate. In contrast, the Taiwanese Navy appears well equipped to counter what this author believes the Chinese can bring to bear in an invasion of Taiwan.

The final issue to consider in this analysis is the PLA Navy ability to support ground forces in the conduct of an amphibious invasion. Strictly speaking, if every single amphibious landing capable ship were employed against Taiwan in an amphibious assault

the PLAN could only move the equivalent of one infantry division and one armored division with no logistics or supporting arms. This assumes that all landing craft are operational and can sail the one hundred miles to the nearest (west) coast of Taiwan. These are problematic assumptions at best. Other experts believe the PLAN can transport only one infantry division.⁶³ This equates to about 15,000 soldiers.

In the final analysis the RoC Navy is adequately designed, trained and equipped to perform the mission for which it was designed. That mission is to protect Taiwan from an invasion by China. China on the other hand is not currently capable of forcing its will on Taiwan strictly by use of its navy or by its navy in support of an invasion by ground forces.

The Air Forces

The PLA Air Force

If one were to look only at the quantities of aircraft available to the PLA Air Force (PLAAF) one could easily conclude that it is a formidable force. In most cases it could be considered formidable regionally, but it is certainly not completely modern by superpower standards. The PLAAF is believed to possess nearly twenty six hundred fighter aircraft but only forty-six could be considered modern. These forty-six are the Russian Su-27. While the aircraft are formidable by the standards of modern air forces the circumstances of their purchase and doctrinal purpose detract from their ability to be used optimally in an invasion scenario. First, because there are so few of the aircraft in the inventory, the PLAAF exercises caution in training to protect them and combined with fiscal restrictions flight hours are minimal.⁶⁴ Secondly, the inability of the Chinese aviation industry to produce modern planes and the agreement under which the planes

were purchased from Russia forces all but the most rudimentary maintenance on the aircraft to be done in Russia. Finally, these aircraft were not purchased solely for the purpose of supporting a Taiwan invasion therefore their consolidation for that event could present some security issues the PRC is not willing to face.

Additional shortcomings of other PLAAF aircraft are that most PLAAF offensive aircraft are produced indigenously and the Chinese aircraft industry had been problematic at best. Even the newest indigenously produced aircraft are considered second rate and pilot training is considered low⁶⁵. Further problems plaguing the PLAAF are its small quantity of aircraft that can assist in targeting and command and control. Aircraft similar to any American Airborne Warning And Control System (AWACS) do not exist. Finally, to detract on more item from the list of PLAAF strengths is the discussion of transport capability. Under the control of the PLAAF is the PLA Airborne Corps. While little is known about the unit's capabilities or actual strength most sources cite three divisions. The transport aircraft that supports this unit are numerous but the majority is ancient. The PLAAF has recently purchased ten IL-76 transports from Russia which is roughly the equivalent of the U.S. C-141 and has the capability of deploying 125 paratroopers per aircraft.⁶⁶ But simple multiplication shows that with all aircraft operational (assumed unlikely) that the PLAAF can only simultaneously deploy 1250 paratroopers (and this is without any type of support weapons or logistics). This is less than one U.S. infantry brigade. This is not a large force.

Although most of this PLAAF assessment has been negative there are two redeeming factors for the future. The first is that more Su-27's are being purchased with a

future plan to locally manufacture and secondly, they can be equipped with anti-ship missiles. This is a significant factor for the navy of an island country.

The RoC Air Force

The RoC Air Force is small but regionally modern if not modern outright. As of 1999 the RoC Air Force had 529 combat aircraft. Of these 529 aircraft 372 were indigenously produced.⁶⁷ These locally produced aircraft had a problematic manufacturing start but are now considered modern and capable aircraft with good local maintenance support. In addition to locally manufactured aircraft the Taiwanese have purchased sixty modern F-16 fighters from the U.S. and thirty Mirage 2000-5 from France.⁶⁸ Since the source was published one hundred and twenty F-16's and thirty Mirages' were to be delivered to Taiwan for a total of one hundred and eighty and sixty F-16's and Mirage's, respectively.⁶⁹

The transport capability of the RoC Air Force is limited but appears to be well suited for the mission of the air force. The RoC Air Force only has nineteen C-130 aircraft but these aircraft are not in the inventory for long-range power projection. They are to support the defensive nature of the military and their short take off and landing capability make them well suited for operations throughout the nation even where airfields are not present, as many Taiwanese roads have been designed for the expressed purpose of in-extremis aircraft operations.⁷⁰

Another significant RoC Air Force strength is its four E-2T Hawkeye AWACS aircraft. These aircraft provide and airborne command and control and targeting platform for the air force throughout the expected battlespace defending Taiwan would require.⁷¹ The final air force strength that should be highlighted is the availability of anti-ship

missiles and naval aviations anti-submarine aviation capability of nine Anti-Submarine Warfare (ASW) helicopters. These are important capabilities given the size of the Chinese navy.

Comparison of Air Forces

The comparison of the air forces is quite simple. Both countries have air forces designed primarily for strategic defense. Therefore the RoC Air Force continues to do what it has long been designed for while the Chinese air force would be executing missions it was not specifically designed for. The RoC Air Force is equipped with more modern equipment and in greatly higher quantities than the PLAAF and pilots of the RoC Air Force receive more than 70% more flight hours than their PLAAF counterpart.⁷² The RoC Air Force, while not well equipped in airborne command and control aircraft are better off than the PLAAF in this category and have been for a number of years so this is not a new capability. In the realm of transport aircraft the PLAAF definitely has greater capability in raw numbers but when compared to PLAAF needs in conjunction with this scenario it is of little value. The RoC Air Force has a small transport capability but for inter-island support missions it is good as opposed to the PLAAF transport capability that cannot adequately fulfill its primary mission of employing large quantities of airborne troops at home or abroad. Although this monograph will not cover the topic suffice to say there is no evidence that the PLAAF has the capability of protecting troop transport aircraft against the modern air defenses of Taiwan. The final comparative topic is air launched anti-ship missiles. These are very important weapons for each side in an invasion scenario. My assessment is that there is parity in this capability.

PLA Missile Capabilities - The Second Artillery

The strategic missile force of the PLA is known as the Second Artillery and is the unit that represents and controls the nations strategic rocket forces.⁷³ While many might visualize intercontinental capable missiles as strategic the PLA seems to consider almost all ground and submarine launched missiles as strategic and therefore part of the Second Artillery.⁷⁴ There are many estimates on the size of the PLA's strategic missile force and they vary greatly from 100 to 1000 but one thing does not vary and that is the fact that most missiles fielded can reach any part of Taiwan from China.⁷⁵

Within PLA military publications numerous articles can be found on the topic of ballistic missile use in an invasion scenario of Taiwan.⁷⁶ Most authors speculate that the type of targets worthy of servicing include military and civilian airfields, ports and communications facilities, political and economic targets, transportation hubs (rail, roads etc), military installations, air defenses and troop concentrations and assembly areas.⁷⁷ Though analysts estimates vary from a few to many missiles needed to achieve unspecified results, the fact appears to be that the PLA has enough ballistic missiles in its inventory to accomplish a pre-emptive or preparatory strike during an invasion of Taiwan.

In response to this specific military capability Taiwan is least prepared. Though a few anti-missile defenses are present around the capital and at other key sites, a missile barrage could overwhelm the defense system. Furthermore, Taiwan has no defense capable of defeating Chinese cruise missiles, which are believed to be extremely accurate.⁷⁸ It appears that the only true measure that might prevent PLA ballistic missile use in a near term invasion scenario is that due to the lack of a PLA power projection and amphibious capability large enough for the task, China would have to destroy the prize to seize it.⁷⁹

CHAPTER VI

TERRAIN ANALYSIS

Terrain Analysis of Taiwan - The Physics of the Problem

Taiwan is an island country approximately one hundred miles east of China separated by the Taiwan Strait. The country is made up of the main island of Taiwan and a number of smaller islands. The lesser islands can be viewed as three sets: The Principal Offshore Islands, consisting of twenty, the Pescadores, comprising sixty four islands, and the Island of Quemoy.

The main island of Taiwan is approximately 140 kilometers wide and 380 kilometers from north to south. Of the 35,980 square kilometers of land that makes up the mother island 67% percent is made up of mountains and hills with a majority being mountains. The remaining third of the island is lowlands adequate for cultivation and urbanization.⁸⁰ The mountainous two thirds of the county is the eastern part of the nation and due to the drastic nature of the terrain virtually separates the east coast from the west coast. Few roads penetrate the mountains.⁸¹ The nature of the mountains prevent off road vehicular movement regardless of weather. Foot mobile soldiers can overcome the mountains but the terrain is considered extremely 'slow go'.⁸² One final significance of the mountain region is that the mountains go right to the sea on the east coast. There is virtually no flat land between the coast and the mountains on the east except for one small cove on the northeast of the island. The significance of this fact will be analyzed later.

On the plains of the western third of the island resides most of the population, urban areas, industry, ports, airfields and agriculture areas. This is also the side of the island that faces China. From a military standpoint the mild nature of the terrain appears

to be well suited to conduct military operations, offense and defense alike but closer examination reveals this is not true. The western lowlands consist almost entirely of rice paddies. The difficulty of military operations in urban terrain is so obvious that discussion is not required here; suffice to say that this terrain favors the defender. The rice paddies, as oft recorded in recent U.S. military history, are terrible for conducting movement of almost any type. The waterlogged terrain of the rice paddies prevents all vehicular traffic except on roads and levees, which are easily targeted or blocked. The open nature of the ground also prevents concealed movement. From a foot soldier's perspective the paddied terrain is miserable to move in and provides little cover or concealment. To this is added the factor that many small streams and ponds cross this area. This factor is especially true near the capital city adding to the defensibility of this key piece of terrain.

Traveling from west to east on the island one reaches hill covered terrain once the lowlands are traversed. The hill terrain is also often used for rice production and much of this area is terraced and continues to provide many difficulties for military forces moving in any direction.⁸³ This terrain is well suited for defense as opposed to offensive operations. Essentially one could liken the lowlands of Taiwan to the bocage of France during World War II. If we remember the difficult situation American forces faced, imagine a Chinese force conducting a similar operation with a paucity of sealift and double the distance to cover from its logistics bases, only a modicum on naval superiority at best and as of the writing of this little chance of gaining air superiority. The Chinese position would be much more difficult.

Specific analysis with regard to terrain implications is most significant when considering an invasion of Taiwan. For China to actually put forces on the ground in

Taiwan the military would, at a minimum, have to fly troops to Taiwan or send them by sea or both. Assuming that Taiwan will oppose the deployment of PLA troops to Taiwan the PLA would be forced to conduct the following operations: amphibious assault, airborne assault or air assault. Following is a terrain analysis with regard for these operations.

Amphibious Assault

According to a study done by TEC there are only twelve possible beaches where amphibious assaults could be conducted in the country of Taiwan and only nine of them are on the main island.⁸⁴ Furthermore only two of these beaches are estimated to be sufficient for large-scale amphibious operations and only one of these beaches is on the main island.⁸⁵ This particular beach is located on the northeast portion of the country. The low plain that the beach opens onto is entirely surrounded by mountains with only three exits. One exit is a highway that follows the coast north. This road is sandwiched between the mountains and the ocean and as it approaches the capital city of Taipei the road turns into a small-improved road as it winds through a congested and winding mountain area. The second exit is a highway that goes over the mountains to Taipei. This road is built in a narrow mountain pass with many switchbacks and would be easily defended or rendered unusable. The final road follows a riverbed inland to the mountains and then follows a convoluted path through the mountains again to Taipei. Due to the drastic nature of this terrain this road could also be easily defended or rendered unusable. Furthermore, occupation of the beach-landing site, although it encompasses two small towns does not appear to contain any key military, industrial, economic, political or agricultural areas. Although this beach is suitable for amphibious landing it would not facilitate an invasion.

Airborne Assault

It is safe to say that since sixty seven percent of Taiwan is mountainous, or at least hilly, that a large portion of the country is not suitable for airborne operations of any type. Furthermore since much of the low lying flat coastal areas in the western one third of the country are covered by urban areas or rice paddies laced with many streams and ponds the locations for conducting large scale airborne assaults are few. This is not to say it is impossible. The RoC Army has two airborne brigades as part of its force structure so there must be drop zones available but this author assumes they are few. Additionally, because they are few and because the RoC Army fields experienced airborne units they have the capability to identify likely drop zones and subsequently could easily make an enemy airborne assault very costly.

Air Assault

It would be easy to argue that because helicopters can land just about anywhere successful air assaults are hard to defend against. This is not the case. Air assault locations are nearly as easy to estimate as airborne assault drop zones. Again, because of the mountainous nature of two thirds of the country, large-scale air assault operations can be virtually disregarded in these areas. If there were any areas suitable for helicopter landings in the mountains they would be easy to identify and appropriate defenses emplaced. The terrain that could support large helicopter landings is in the western third of the nation, which is most densely populated and therefore presents a number of problems for the invading force. Subsequent landings would be without surprise, troop movement out of landing zones would most likely be through urban areas or rice paddies and because of the paucity of large landing zones units would be tied to landing zones for

the influx of logistics. This provides for easy targeting of a Chinese vulnerability by RoC forces. A final obstacle for any invading forces is that there are no indicators that the population of Taiwan would support an invading force in any way.

CHAPTER VII

JOINT OPERATIONS CAPABILITIES

Joint Operations - PRC

There is no evidence that any arm of the PLA is prepared to conduct joint military operations. Although there is a clear understanding of the need to conduct joint operations and at least some level of focus on development of joint capabilities through exercises, the military strategy and training the capability to actually do it now is virtually non-existent.⁸⁶ This author has found no specific studies on the ability of the PLA to conduct joint operations but there are many indicators throughout the available open source literature to draw a conclusion. First, there is the education level of the military leadership. There are numerous reports that although the educational level of the PLA leadership is improving it is still sub-standard by modern measurements. A contributing factor is the poor living conditions and lifestyle of the military and the fact that a good Chinese economy is enticing educated and skilled soldiers to leave the service.⁸⁷ Other factors for the inability to conduct joint operations is the fact that the air force has limited flight hours for training its pilots and in the interests of preserving aircraft and trained personnel, pilots are only allowed to fly under the best conditions.⁸⁸ Therefore, one can conclude in this instance that the air force might have a hard time operating by itself under the weather and visibility conditions required during and invasion let alone with sister services.

Joint Operations - Republic of China

For nearly all the reasons that the PLA cannot conduct joint operations the armed forces of the Republic of China can. To begin with, the RoC military strategy has been in place for some time and the armed forces have been designed to deal with the defensive nature of the strategy. The Taiwanese army has established itself as one that places education as a pillar of its military philosophy and has established and maintains a “competent and capable” officer corps.⁸⁹ Additionally, the robust Taiwanese economy has allowed the development of a robust military budget that has allowed adequate training. As an example one can reference the earlier chapter on the comparison of air forces and see how many more hours the Taiwanese fly their planes with respect to the PLAAF. The Taiwanese air force also provides another insight into the military’s ability to conduct joint operations. The fact that the air force is and has been equipped for some time with AWACs planes is an indicator that the ability to conduct joint operations is a reality.⁹⁰

Joint Operations Conclusions

The military forces of the PRC are not capable of conducting joint operations of any scale. The military forces of the RoC are capable of conducting joint operations in a manner that is mature when compared to the PRC. Although the PRC is focused on developing the capability to conduct joint operations it currently does not exist in a manner that gives the military any advantage, particularly in an invasion scenario.

CHAPTER VIII

PLA COURSES OF ACTION FOR INVASION OF TAIWAN

Courses of Action

An invasion of Taiwan by the military forces of the Peoples Republic of China could take many forms. This author assumes that in any invasion scenario one would assess the leadership of the PRC, military and civilian, to be rational and therefore would execute a course of action that they considered to be based on a PLA strength. The author believes that although all the branches of the PLA are assessed to be individually inferior to its RoC counterpart the PRC leadership assessment would be somewhat different and that the following scenarios would be considered feasible, acceptable and suitable for invasion scenarios by the PRC military and civilian leadership.

1. Missile Attack - Blockade / Mining: This scenario presupposes that the PRC can force Taiwan to reunify with China without the deployment of troops. While this is not a conventional invasion, it is an invasion of Taiwanese sovereignty and clearly an option that capitalizes on one strength of the PLA - its missiles. This scenario also supposes that China will be willing to destroy or nearly destroy anything of national value in Taiwan to force reunification. While estimates of the Chinese missile inventory vary it is believed by some that the inventory is ample enough and sophisticated enough to do considerable damage to military, diplomatic, economic and communication infrastructure. A missile attack of this magnitude followed by the isolation of the island through blockade and sea mining in theory, could eventually force the capitulation of Taiwan and subsequently force reunification. This scenario would be predicated on the fact that PLA

ground forces would not need to be deployed and that the Taiwanese air force and navy could be destroyed.

2. Missile Attack - Blockade / Mining - Joint Invasion: This scenario is somewhat like the previous except it requires the eventual deployment of ground troops as an invasion force not as an occupation force. This scenario may be considered a branch to the previous scenario if the missile attacks and blockade did not work. The key difference with this scenario from the previous is the use of anti-ship mines to enhance a blockade. The PLA navy has little naval minesweeping capability and therefore could not mine where it would expect to deploy amphibious forces. The absence of mines in a particular area could be an indicator of lanes prepared to support an amphibious assault and could therefore assist in the focusing of Taiwanese defense forces. The current inability of the PLA to conduct joint operations could then make this a difficult course of action.

3. Missile Attack - Joint Invasion: This course of action supposes that the PLA believes they can conduct joint operations contrary to this author's assessment. This course of action would begin with a missile attack designed to do the same things as the previous scenarios: destroy the Taiwanese military capability to defend itself and demoralize the population. This portion of the operation would then be followed by an invasion by ground forces in the forms of amphibious and airborne assaults. This course of action also assumes that the Chinese care little about the condition of Taiwan after they seize it.

4. Blockade / Mining - Joint Invasion: This course of action supposes that China does care about the condition of Taiwan after a successful forced reunification and therefore will not use missiles against ground targets. From this assumption it follows

that blockade operations (to include mining of key sea lines of communication) would be used in order to place the nation in economic hardship and to otherwise demoralize the population. After appropriate damage is inflicted by blockade the invasion by ground troops would begin. This again would come in the form of amphibious and airborne assaults. The key detractor to this course of action again is that the absence of sea mines could indicate amphibious assault routes.

5. Joint Attack / Invasion: This course of is the most dangerous course of action for the PLA. It is the one the RoC military is designed to protect against and one that the PLA is not designed to execute. Since the PLA has little capability to conduct joint operations and large amphibious or airborne operations any attempt would meet with little success. This course of action if successful could produce the least damage to Taiwan while simultaneously forcing reunification.

While there may be countless other options for the People's Republic of China these seem the most plausible given the PRC philosophy and capabilities.

CHAPTER IX

CONCLUSION

As of the writing of this monograph the People's Republic of China does not have the military capability to invade Taiwan with ground forces in order to force reunification of Taiwan with the mainland.

National Military Strategies

Since its inception in 1949, numerous potential enemies have surrounded the Peoples Republic of China. Due to the fact that it was a poor country it was unable to quickly develop a modern military, especially in light of the fact that the nation had just

finished fighting a very costly war. In order to defend the sovereignty of the nation and the hegemony of the communist party in the country, the PRC built a military based on what was available and for the most likely scenario it would face. What was available was people and what was most likely to be faced was an invasion from a neighboring country. Therefore, the military was developed to defeat invaders from neighboring nations and to crush internal unrest.

The Republic of China faced only one threat upon its inception and that was to protect itself from forced reunification with China. The RoC originally did not have to field a military that could do this because it had time, geography and the United States on its side. As the nation matured and the economy strengthened the military was also matured while the philosophy that designed it remained the same.

Although the PRC has always desired reunification with Taiwan its National Military Strategy has never supported the mission whereas the RoC National Military Strategy has always supported its desires. Therefore from a philosophical standpoint the PRC is not prepared to force reunification of Taiwan through invasion.

The Armed Forces

This monograph has shown that comparatively each branch of military service of the PRC is not as capable as its Taiwanese counterpart. While each branch of service of the PRC is much larger than its Taiwanese counterpart the disparity in levels of training, amount of modern equipment and ability to execute missions is so great that the PRC quantity cannot overcome RoC quality.

The result of a defensive strategy since its inception has led the PLA to design itself into a defensive force and has subsequently developed little power projection

capability. The bulk of the PLAAF is not modern. The outdated majority of the PLAAF cannot project itself and is inferior to the capabilities of Taiwan's Air Force. The portion of the PLAAF that is modernly equipped is small and poorly trained in basic tasks and cannot coordinate itself with sister services to enhance its capabilities. This is another difference from the Taiwanese Air Force. These same shortcomings ring true for the other services. The PLAN is larger than the RoC navy but is not as modern or well trained, has large defensive commitments and has almost no power projection capabilities. The PLA ground forces suffer from the same thing. It is not a modern, well-trained or well-equipped force. Its one great advantage is its size and currently this strength cannot be brought to bear against Taiwan.

In almost every category the RoC military is more modern, better trained and equipped and better oriented than its opposition. Without the PLA being able to use its size advantage against Taiwan, it stands little chance of success against Taiwan with respect to military operations. The PLA's only advantage is its missile force and it is of little value if the PRC wants to reunify with Taiwan somewhat intact.

Offense versus Defense

The greatest advantage Taiwan has against the PRC is the geography is suited to the country's mission. The one hundred mile Taiwan Strait provides a significant obstacle for an attacking force. In addition, due to the nature of the ground on the island, the defending force also has the advantage should an invasion force be able to land. Landing sites are congested, provide poor mobility for the attacking force but great fields of fire for defenders and are interspersed with urban areas that are another great advantage to defenders. If these two geographic obstacles should be breached the drastic mountainous

terrain which covers a majority of Taiwan again is suited for defense and would be brutal to clear for an attacking force.

The facts are clear. The PRC would have to break the will of the RoC through missile attacks in order to have any chance of deploying troops to Taiwan. If the people of Taiwan fight in the face of PRC opposition they can defeat any attempt at an invasion.

¹ Eric Eckholm, "After 50 Years, Nationalists are Ousted in Taiwan Vote", *New York Times*, 19 March 2000, 1.

² *Ibid.*, 1.

³ Samuel C.Y. Ku, "Southeast Asia and Cross Strait Relations: The Policy of Separation of Politics and Economics," *Journal of Contemporary China*, November 1998, 3.

⁴ Chen Qimao and Wei Yung, *The Atlantic Council of the United States, Relations Across the Taiwan Strait: Perspectives From Mainland China and Taiwan*, (Washington, DC: The Atlantic Council of the United States, 1998), 1-75.

⁵ Ming Zhang and Ronald N. Montaperto, *A Triad of Another Kind: The United States, China and Japan*, (London: Macmillan Press LTD, 1999), 14.

⁶ *The Europa World Yearbook 1998, Volume II*, The United States of America (London: Europa Publications, 1998), 3602.

⁷ Zhang and Montaperto, *A Triad of Another Kind*, 17.

⁸ Elisabeth Rosenthal, "Deep Feeling That China Owns Taiwan Put to the Test", *New York Times*, 20 May 2000, 1.

⁹ Trevor N. Depuy, *The Chinese Civil War*, (New York: Franklin Watts Inc., 1969), 4.

¹⁰ *Ibid.*, 5.

¹¹ *Ibid.*, 5-12.

¹² *Ibid.*, 25-26.

¹³ James C. Mulverson and Richard H. Yang, *The Peoples Liberation Army in the Information Age*, (Santa Monica: RAND, 1999), 100.

¹⁴ *Ibid.*, 101-102.

¹⁵ *Ibid.*, 108.

¹⁶ *Ibid.*, 129-130.

¹⁷ *Ibid.*, 123.

- ¹⁸ U.S. Department of State, *Department of Defense Report to Congress Pursuant to the FY99 Appropriations Bill*, 1999, 3.
- ¹⁹ *Jane's Sentinel*, Security Assessment: China and North-East Asia, (Virginia: Jane's Information Group, 1995), 9.
- ²⁰ *CIA Factbook-Taiwan*, www.odci.gov/publications/factbook/tw.html, 22 March 2000.
- ²¹ Philip E.T. Lewis, *The Peoples Republic of China; Economy, Regional Surveys of the World, The Far East and Australasia 2000*, Europa Publication, 31st edition, 348.
- ²² *Ibid.*, 348-350.
- ²³ *CIA Factbook-Taiwan*, 22 March 2000.
- ²⁴ Lewis, *The Peoples Republic of China; Economy, Regional Surveys of the World, The Far East and Australasia 2000*, Europa Publication, 31st edition, 348.
- ²⁵ "Industry Plays a Vital Part in Modernization," *Janes Defense Weekly*, 8 July 1998, 26-27.
- ²⁶ *Ibid.*
- ²⁷ Hendrichske, *The Regional Surveys of the World*, 251-252.
- ²⁸ Mulverson and Yang, *The Peoples Liberation Army in the Information Age*, 117.
- ²⁹ Hendrichske, *The Regional Surveys of the World*, 255.
- ³⁰ *CIA Factbook-China*, www.odci.gov/publications/factbook/ch.html, 22 March 2000.
- ³¹ *The Regional Surveys of the World*, 267, 357.
- ³² Bernard D. Cole and Paul H.B. Goodwin, *The Chinese Armed Forces in the 21st Century*, (Carlisle, PA: Strategic Studies Institute, 1999), 159-209.
- ³³ Mulverson and Yang, *The Peoples Liberation Army in the Information Age*, 119 and 187-215.
- ³⁴ *The Military Balance 1998/1999*, (London: Oxford University Press, 1998), 178-179.
- ³⁵ "Army Seeks Mobility in Force Cuts," *Janes Defence Weekly*, 16 December 1998, 22.
- ³⁶ Cole and Goodwin, *The Chinese Armed Forces in the 21st Century*, 159-216.
- ³⁷ *The Military Balance 1998/1999*, 178-179.
- ³⁸ "Rapid Deployment Key to PLA Modernization," *Janes Defence Weekly*, 15 April 1998, 30.
- ³⁹ *Ibid.*, 32.
- ⁴⁰ *Department of Defense Report to Congress Pursuant to the FY99 Appropriations Bill*, 1999, 10-11.
- ⁴¹ Richard A. Bitzinger and Bill Gates, *Gearing Up for High-Tech Warfare? Chinese and Taiwanese Defense Modernization and Implications for Military Confrontation Across the Taiwan Strait, 1995-2005*, (Washington DC: Center for Strategic and Budgetary Assessments, February 1996), 25.
- ⁴² *The Military Balance*, 197.
- ⁴³ *Ibid.*
- ⁴⁴ Peter Yu Kien-hong, "Taking Taiwan," *Janes Intelligence Review*, Volume 10, Number 9, September 1998, 32.
- ⁴⁵ Ross H. Munro and Richard Bernstein, *The Coming Conflict with China*, (New York: Alfred A. Knopf, 1997), 160-161.
- ⁴⁶ Rosenthal, "Deep Feeling That China Owns Taiwan Put to the Test", *New York Times*, 20 May 2000, 1.
- ⁴⁷ *Periscope*, www.periscope.ucg.com/nations/asia/china/navy/index.html, 21 January 2000.
- ⁴⁸ John J. Schulz, "China as a Strategic Target," *Strategic Review*, Winter 1998, 8-9.
- ⁴⁹ Mulverson and Yang, *The Peoples Liberation Army in the Information Age*, 117.
- ⁵⁰ "People's Republic of China," *Asian Defence Yearbook*, 1999, 121.
- ⁵¹ Viacheslav A. Frolov, "The PLA's Naval Build Up in the 1990's: A Political as Much as a Military Message," *Defense and Foreign Affairs Strategic Policy*, August 1998, 6-7.
- ⁵² Dr. Eshan Ahrari, "China's Naval Forces Look to Extend Their Blue Water Reach," *Jane's Intelligence Review*, April 1998, 32.
- ⁵³ *Ibid.* and Cole, *The Chinese Armed Forces in the 21st Century*, 159-209.
- ⁵⁴ Dennis J. Blasko, "The Chinese Military: An Assessment," *The World & I*, October 1999, 7, <http://proquest.umi.com/pdqlink>, 21 January 2000.
- ⁵⁵ *Periscope*, www.periscope.ucg.com/nations/asia/china/navy/index.html, 21 January 2000.
- ⁵⁶ Frolov, "The PLA's Naval Build Up in the 1990's: A Political as Much as a Military Message," *Defense and Foreign Affairs Strategic Policy*, August 1998, 7, and, "New PLAN to Train, Purchase Vessel Mix," *Jane's Defence Weekly*, 16 December 1998, 25.
- ⁵⁷ *Periscope*, www.periscope.ucg.com/nations/asia/china/navy/index.html, 21 January 2000.

-
- ⁵⁸ The Military Balance, 197-198.
- ⁵⁹ *Jane's Fightings Ships, 1998-1999*, (Virginia: Jane's Information Group, 1998), 115 and 677
- ⁶⁰ *Department of Defense Report to Congress Pursuant to FY99 Appropriations Bill*, 3.
- ⁶¹ Cole and Goodwin, *The Chinese Armed Forces in the 21st Century*, 159-209.
- ⁶² The Military Balance, 179-180 and 197-198.
- ⁶³ Sean Boyne, "Taiwans Troubles," *Jane's Intelligence Review*, September 1998, 26.
- ⁶⁴ "Air Force Frontliners to See New Fighter Breed," *Jane's Defence Weekly*, 16 December 1998, 27.
- ⁶⁵ Cole and Goodwin, *The Chinese Armed Forces in the 21st Century*, 159-209.
- ⁶⁶ *All the World's Aircraft, 1998-1999*, (Virginia: Jane's Information Group, 1998), 352.
- ⁶⁷ The Military Balance, 198.
- ⁶⁸ Ibid.
- ⁶⁹ Ibid.
- ⁷⁰ *Jane's Sentinel: China and Northeast Asia, Taiwan*, (Virginia: Jane's Information Group 1995), 15.
- ⁷¹ Cole and Goodwin, *The Chinese Armed Forces in the 21st Century*, 303.
- ⁷² The Military Balance, 180 and 198.
- ⁷³ *Jane's Sentinel: China and Northeast Asia, Taiwan*, (Virginia: Jane's Information Group 1995), 23.
- ⁷⁴ Ibid.
- ⁷⁵ Kien-hong, "Taking Taiwan," *Jane's Intelligence Review*, September 1998, 30-31.
- ⁷⁶ Ibid.
- ⁷⁷ Ibid.
- ⁷⁸ Ibid.
- ⁷⁹ Ross H. Munro, *The Coming Conflict with China*, 163.
- ⁸⁰ *TEC Study*, www.tec.army.mil/od/mcs/mcshtml/taiwan, 23 March 2000.
- ⁸¹ Ibid.
- ⁸² Ibid.
- ⁸³ Ibid.
- ⁸⁴ Ibid.
- ⁸⁵ Ibid., 98.
- ⁸⁶ Ken Gause, "PLAAF Continues to Modernize at a Slow Yet Steady Pace," *Jane's Intelligence Review*, June 1998, 42.
- ⁸⁷ *Department of Defense Report to Congress Pursuant to FY99 Appropriations Bill*, 11.
- ⁸⁸ "Air Force Frontliners to See New Fighter Breed," *Jane's Defence Weekly*, 16 December 1998, 27.
- ⁸⁹ *Department of Defense Report to Congress Pursuant to FY99 Appropriations Bill*, 18.
- ⁹⁰ Felix K. Chang, "Conventional War Across the Taiwan Strait," *Orbis*, Fall 1996, 583-584.

BIBLIOGRAPHY

BOOKS

- Bellows, Michael D. *Asia in the 21st Century: Evolving Strategic Priorities*. Washington D.C.: National Defense University Press, 1994.
- Bernstein, Richard and Ross H. Munro. *The Coming Conflict with China*. New York: Alfred A. Knopf, 1997.
- Bitzinger, Richard A. and Bates Gill. *Gearing Up for High-Tech Warfare? Chinese and Taiwanese Defense Modernization and Implications for Military Confrontation Across the Taiwan Strait, 1995-2005*. Washington D.C.: Center for Strategic and Budgetary Assessments, 1996.
- Cole, Bernard D. and Paul H.B. Goodwin, *The Chinese Armed Forces in the 21st Century*. Carlisle, PA: Strategic Studies Institute, 1999.
- Dreyer, June Teufel. *Chinese Defense and Foreign Policy*. New York: Paragon House, 1989.
- Dupuy, Trevor N. *The Chinese Civil War*. New York: Franklin Watts Inc., 1969.
- Fairbank, John K. *The United States and China*. Massachusetts: Harvard University Press, 1983.
- Grinter, Lawrence E., and Young Whan Kihl. *East Asian Conflict Zones*. New York: Saint Martin's Press, 1987.
- Hendrichske, Hans. *The Far East and Australasia 2000*. London: Europa Publications, 1999.
- Lane, C. Dennison, Dimon Liu, and Mark Weisenbloom. *Chinese Military Modernization*. New York: Kegan Paul International, 1996.
- Lewis, Philip E.T. *The Far East and Australasia 2000*. London: Europa Publications, 1999.
- Montaperto, Ronald N. and Ming Zhang. *A Triad of Another Kind: The United States, China, and Japan*. London: Macmillan Press LTD, 1999.
- Morrison, Charles E. *Asia Pacific Security Outlook 1998*. New York: Japan Center for International Exchange, 1998.

- Mulverson, James C. And Richard H. Yang. *The People's Liberation Army in the Information Age*. Santa Monica: RAND National Security Research Division, 1999.
- Qimao, Chen and Wei Yung. *Relations Across the Taiwan Strait: Perspectives from Mainland China and Taiwan*. Washington D.C.: The Atlantic Council, 1999.
- Segal, Gerald, and William T. Tow. *Chinese Defense Policy*. Illinois: University of Illinois Press, 1984.
- Stuart, Douglas T., and William T. Tow. *China, the Soviet Union, and the West: Strategic and Political Dimensions in the 1980's*. Colorado: Westview Press, 1982.
- Swaine, Michael D. *The Military and Political Succession in China: Leadership Institution Beliefs*. California: RAND, 1992.
- _____. *The Chinese Armed Forces in the 21st Century*. Pennsylvania: The Strategic Studies Institute, 1999.
- _____. *China in Crisis: The Role of the Military*. United Kingdom, Jane's, 1989.
- _____. *Department of Defense Report to Congress Pursuant to the FY99 Appropriations Bill: The Security Situation in the Taiwan Strait*. Washington D.C.: U.S. Department of Defense, 1999.
- _____. *Strategic Assessment 1999: Priorities for a Turbulent World*. Washington D.C.: Institute for National Strategic Studies, 1999.
- _____. *Asia in the 21st Century: Evolving Strategic Priorities*. Washington D.C.: Institute for National Strategic Studies, 1994.
- _____. *The Military Balance 1998/1999*. London: Oxford University Press for The International Institute for Strategic Studies, 1998.
- _____. *The Europa World Yearbook 1998, Volume II*. London: Europa Publications, 1998.
- _____. *Jane's Sentinel: Security Assessment - China and North-East Asia*. Virginia: Jane's Information Group, 1995.
- _____. *The Military Balance 1998/1999*.
- _____. *Jane's Fighting Ships, 1998-1999*. Virginia: Jane's Information Group, 1998.
- _____. *All the World's Aircraft, 1998-1999*. Virginia: Jane's Information Group, 1998.

ARTICLES

- Ahrari, Ehsan. "China's Naval Forces Look to Extend their Blue-Water Reach." *Jane's Intelligence Review*, (April 1998).
- Anderson, Christopher. "Survey: Taiwan: In Praise of Paranoia." *The Economist* (November 7, 1998).
- Anderson, Christopher. "Survey: Taiwan: Apocalypse, Maybe." *The Economist* (November 7, 1998).
- Arkin, William M., and Robert S. Norris. "Chinese Nuclear Forces, 1999." *Bulletin of the Atomic Scientists* (May / June 1999).
- Aubin, Stephen P. "China: Yes, Worry About the Future." *Strategic Review* (Winter 1998).
- Baum, Julian. "Defence Dilemma." *Far Eastern Economic Review* (May 28, 1998).
- Blasko, Dennis J. "The Chinese Military: An Assessment." *The World & I*, (October 1999).
- Bluth, Christoph. "Russia and China Consolidate Their New Strategic Partnership." *Jane's Intelligence Review*, (August 1998).
- Boyne, Sean. "National Defence Report Highlights Chinese Threat." *Jane's Intelligence Review*, (September 1998).
- Chang, Felix K. "Conventional War Across the Taiwan Strait." *Orbis*, (Fall 1996).
- Covault, Craig. "Chinese Army May use U.S. Satellite." *Aviation Week & Space Technology* (June 1, 1998).
- Delpech, Therese. "Nuclear Weapons and the 'New World Order': Early Warning from Asia?" *Survival*, (Winter 1998-1999).
- Eckholm, Eric. "After 50 Years, Nationalists are Ousted in Taiwan Vote." *New York Times*, (19 March 2000).
- Friedman, Norman. "What is 'Military' Technology?" *U.S. Naval Institute Proceedings*, (August 1998).

- Frolov, Viacheslav A. "PLA's Naval Build-up in the 1990's: A Political as much as a Military Message." *Defense and Foreign Affairs Strategic Policy*, (August 1998).
- Gause, Ken. "PLAAF (People's Liberation Army Air Force) Continues to Modernize at a Slow Yet Steady Pace." *Jane's Intelligence Review*, (June 1998).
- Gilley, Bruce. "Operation Mind Games." *Far Eastern Economic Review* (May 28, 1998).
- Halloran, Richard. "China: Restoring the Middle Kingdom." *Parameters*, (Summer 1998).
- Hirschfeld, Thomas J., "Assessing China's Military Potential." *East Asia: An International Quarterly* (Spring 1999).
- Jaffe, Amy M., and Robert A. Manning. "Myth of the Caspian 'Great Game': The Real Geopolitics of Energy." *Survival* (Winter 1998-1999).
- Ji, You. "The Revolution in Military Affairs and the Evolution of China's Strategic Thinking." *Contemporary Southeast Asia* (December 1999).
- Jianzhong, Gong. "Taiwan's Future Lies in Reunification with the Motherland." *RUSI Journal*, (June 1998).
- Karniol, Robert. "Interview: General Tang Fei, Chief of the General Staff, Republic of China (Taiwan) Armed Forces." *Jane's Defence Weekly*, (July 1998).
- Kien-hong, Peter Yu. "How would China set about Recovering the Republic?" *Jane's Intelligence Review*, (September 1998).
- Khol, Ronald. "How Design Analysis can be a Strategic Weapon." *Machine Design* (June 17, 1999).
- Ku, Samuel C.Y. "Southeast Asia and Cross-Strait Relations: The Policy of Separation of Politics and Economics." *Journal of Contemporary China* (November 1998).
- Lawrence, Susan V. "Doctrine of Deterrence." *Far Eastern Economic Review* (October 14, 1999).
- Maier, Timothy W. "China gets U.S. Military Phones." *Insight on the News* (December 21, 1998).
- Malik, Mohan. "Nuclear Proliferation in Asia: The China Factor." *Australian Journal of International Affairs* (April 1999).

- Prina, L. Edgar. "Heritage Analyst (Richard D. Fisher Jr.) Warns Against New Tilt to Beijing." *Sea Power*, (June 1998).
- Rosenthal, Elisabeth. "Deep Feeling That China Owns Taiwan Put to the Test." *New York Times*, (20 May 2000).
- Scobell, Andrew. "Taiwan as Macedonia? Strait Tensions as a Syndrome." *Studies in conflict and Terrorism*, (April - June, 1998).
- Shulz, John J. "China as a Strategic Threat: Myths and Verities." *Strategic Review*, (Winter 1998).
- Smedberg, W.R. "The Naked Fleet." *United States Naval Institute Proceedings* (April 1999).
- Timperlake, Ed, and William C. Triplett. "Military-to-Military Exchanges with China Endanger Taiwan as well as the United States." *Insight on the News* (December 13, 1999).
- Tucker, Nancy B. "China - Taiwan: US Debates and Policy Choices." *Survival* (Winter 1998-1999).
- Young, Peter L. "Asia's Economic Crisis: The Challenge of Containing the Damage." *Armed Forces Journal International*, (February, 1998).
- Zhenang, Ma. "China's Independent Foreign Policy of Peace." *RUSI Journal*, (February, 1998).
- _____. "Rapid Deployment Key to PLA Modernization." *Jane's Defence Weekly*, (April 15, 1998).
- _____. "Industry Plays a Vital Part in Modernization." *Janes Defense Weekly*, (8 July 1998).
- _____. "Army Seeks Mobility in Force Cuts." *Janes Defence Weekly*, (16 December 1998).
- _____. "People's Republic of China." *Asian Defence Yearbook*, (1999).
- _____. "Air Force Frontliners to See New Fighter Breed." *Jane's Defence Weekly*, (16 December 1998).

INTERNET ARTICLES

CIA Factbook-Taiwan, www.odci.gov/publications/factbook/tw.html, 22 March 2000.

CIA Factbook-China, www.odci.gov/publications/factbook/ch.html, 22 March 2000.

Periscope, www.periscope.ucg.com/nations/asia/china/navy/index.html, 21 January 2000.

TEC Study, www.tec.army.mil/od/mcs/mcshtml/taiwan, 23 March 2000.